

FFFFFF	000000000	RRRRRRRRRRRR	RRRRRRRRRRRR	TTTTTTTTTTTTT	LLL	
FFFF	000000000	RRRRRRRRRRRR	RRRRRRRRRRRR	TTTTTTTTTTTTT	LLL	
FFFF	000000000	RRRRRRRRRRRR	RRRRRRRRRRRR	TTTTTTTTTTTTT	LLL	
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFFF	000	000	RRRRRRRRRRRR	RRRRRRRRRRRR	TTT	LLL
FFFF	000	000	RRRRRRRRRRRR	RRRRRRRRRRRR	TTT	LLL
FFFF	000	000	RRRRRRRRRRRR	RRRRRRRRRRRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000	000	RRR	RRR	TTT	LLL
FFF	000000000	RRR	RRR	RRR	TTT	LLLLLLLLLLLL
FFF	000000000	RRR	RRR	RRR	TTT	LLLLLLLLLLLL
FFF	000000000	RRR	RRR	RRR	TTT	LLLLLLLLLLLL

FFFFFFFFF	000000	RRRRRRRR	WW	WW	RRRRRRRR	IIIIII	TTTTTTTT	SSSSSSSS	LL
FFFFFFFFF	000000	RRRRRRRR	WW	WW	RRRRRRRR	IIIIII	TTTTTTTT	SSSSSSSS	LL
FF	00	00	RR	RR	WW	WW	RR	RR	TT
FF	00	00	RR	RR	WW	WW	RR	RR	TT
FF	00	00	RR	RR	WW	WW	RR	RR	TT
FF	00	00	RR	RR	WW	WW	RR	RR	TT
FF	00	00	RRRRRRRR	WW	WW	RRRRRRRR	IIII	TT	SS
FF	00	00	RRRRRRRR	WW	WW	RRRRRRRR	IIII	TT	SS
FF	00	00	RR	RR	WW	WW	RR	RR	TT
FF	00	00	RR	RR	WW	WW	RR	RR	TT
FF	00	00	RR	RR	WWWW	WWWW	RR	RR	TT
FF	00	00	RR	RR	WWWW	WWWW	RR	RR	TT
FF	00	00	RR	RR	WWWW	WWWW	RR	RR	TT
FF	000000	RR	RR	WW	WW	RR	RR	IIIIII	SSSSSSSS
FF	000000	RR	RR	WW	WW	RR	RR	TT	SSSSSSSS
LL	IIIIII	SSSSSSSS	SSSSSSSS						
LL	IIIIII	SS	SS						
LL	IIIIII	SS	SS						
LL	IIIIII	SSSSSS	SSSSSS						
LL	IIIIII	SS	SS						
LL	IIIIII	SS	SS						
LL	IIIIII	SS	SS						
LLLLLLLL	IIIIII	SSSSSSSS	SSSSSSSS						

(2)	56	HISTORY
(3)	85	DECLARATIONS ; Detailed Current Edit History
(4)	129	FOR\$WRITE_SL - WRITE Sequential LIST-DIRECTED

```
0000 1 .TITLE FORSWRITE_SL - entry point for FORTRAN WRITE SEQUENTIAL LIST-DIRECTE
0000 2 .IDENT /1-011/ File: FORWRITSL.MAR Edit: JAW1011
0000 3 ****
0000 4 ****
0000 5 */
0000 6 */ COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 17 */ THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
0000 18 */ AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
0000 19 */ CORPORATION.
0000 20 */
0000 21 */ DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0000 22 */ SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 23 */
0000 24 */
0000 25 ****
0000 26 */
0000 27 */
0000 28 */
0000 29 */ FACILITY: FORTRAN Support Library - user callable
0000 30 */
0000 31 */ ABSTRACT:
0000 32 */
0000 33 */
0000 34 */
0000 35 */
0000 36 */
0000 37 */
0000 38 */ MAINTENANCE NOTE:
0000 39 */
0000 40 */
0000 41 */
0000 42 */
0000 43 */
0000 44 */
0000 45 */
0000 46 */
0000 47 */
0000 48 */
0000 49 */
0000 50 */
0000 51 */
0000 52 */
0000 53 */
0000 54 */

        This module contains the entry point for the FORTRAN
        WRITE SEQUENTIAL LIST-DIRECTED I/O statement. It is simply
        a call to FOR$IO_BEG with bits in R0 which describe the
        parameter list. FOR$IO_BEG interprets the parameters.

        MAINTENANCE NOTE:
        The transfer vector (RTLVECTOR+ALLLBL) must have the following:

        .TRANSFER      FOR$WRITE_SL
        .MASK          FOR$IO_BEG
        BRW           FOR$WRITE_SL+2

        This puts the correct mask in entry vector, that is FOR$IO_BEG entry mask.
        Furthermore this module must only use R0 and R1
        since any other register might not be in the entry mask for FOR$IO_BEG.

        ENVIRONMENT: User access mode; mixture of AST level or not

        AUTHOR:      Richard B. Grove, CREATION DATE: 28-May-78

        MODIFIED BY:
                    T. Hastings, 29-July-78
```

0000 56 .SBTTL HISTORY : Detailed Current Edit History
0000 57
0000 58
0000 59 ; Edit History for Version 1
0000 60
0000 61 : 0-10 - Add comment about vectors. TNH 23-June-78
0000 62 : 0-12 - Pass arg in R0, not ROR, add comments. TNH 29-July-78
0000 63 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78
0000 64 : 1-002 - Change statement type symbols to be LUB\$K... JBS 07-DEC-78
0000 65 : 1-003 - Change statement type symbols to be ISB\$K... JBS 11-DEC-78
0000 66 : 1-004 - Add " to the PSECT directive. JBS 22-DEC-78
0000 67 : 1-005 - Add FOR\$READ_KF, FOR\$READ_KO, FOR\$REWRITE_SF, FOR\$REWRITE_SO,
0000 68 : FOR\$READ_IF, FOR\$READ_IO, FOR\$WRITE_IF, FOR\$WRITE_IO,
0000 69 : FOR\$READ_KU, FOR\$REWRITE_SU,
0000 70 : SBL 2-May-1979
0000 71 : 1-006 - Remove all entry points that need object time formatting,
0000 72 : putting them in FORSENTRY_OBJ so that we can arrange to
0000 73 : load the format compiler only when it is needed.
0000 74 : JBS 26-JUN-1979
0000 75 : 1-007 - Remove entry point FOR\$ENCODE_MF; we will code a new module
0000 76 : for it and FOR\$IO_BEG, to see how much I/O initiation time
0000 77 : improves. JBS 02-JUL-1979
0000 78 : 1-008 - Do likewise for FOR\$READ_DU and FOR\$WRITE_DU. JBS 03-JUL-1979
0000 79 : 1-009 - Remove all entry points except FOR\$WRITE_SL; each of the
0000 80 : others gets its own module so we can selectively load
0000 81 : the necessary UDF and REC modules. JBS 09-JUL-1979
0000 82 : 1-010 - New parameter format for FOR\$IO_BEG. SBL 5-Dec-1979
0000 83 ; 1-011 - Change BRW FOR\$IO_BEG+2 to JMP G^FOR\$IO_BEG+2. JAW 21-Feb-1981

```
0000 85      .SBTTL DECLARATIONS
0000 86
0000 87      : INCLUDE FILES:
0000 88      :
0000 89      :
0000 90
0000 91      $FORPAR           : Define inter-module FORTRAN symbols
0000 92      $ISBDEF           : Define statement type symbols
0000 93
0000 94      : EXTERNAL SYMBOLS:
0000 95      :
0000 96      :
0000 97
0000 98      .DSABL GBL           : Declare all external symbols
0000 99      .EXTRN FOR$SIO_BEG    : common I/O statement processing
0000 100     ;+
0000 101     : The following references are to make sure the necessary UDF and REC
0000 102     : modules are loaded. These are the routines which are called through
0000 103     : the dispatch tables in FOR$DISPAT.
0000 104     ;-
0000 105     .EXTRN FOR$UDF_WL0, FOR$UDF_WL1, FOR$UDF_WL9
0000 106     .EXTRN FOR$REC_WSL0, FOR$REC_WSL1, FOR$REC_WSL9
0000 107
0000 108
0000 109     : MACROS:
0000 110
0000 111     : NONE
0000 112
0000 113     : PSECT DECLARATIONS:
0000 114
0000 115
00000000 116     .PSECT _FOR$CODE PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,LONG
0000 117
0000 118     : EQUATED SYMBOLS:
0000 119
0000 120
0000 121
0000 122
0000 123     : OWN STORAGE:
0000 124
0000 125
0000 126     : NONE
0000 127
```

0000 129 .SBTTL FOR\$WRITE_SL - WRITE Sequential LIST-DIRECTED
0000 130
0000 131 :++
0000 132 : FUNCTIONAL DESCRIPTION:
0000 133
0000 134 Initialize the FORTRAN I/O system to perform
0000 135 a WRITE sequential LIST-DIRECTED I/O statement.
0000 136
0000 137 : CALLING SEQUENCE:
0000 138
0000 139 CALL FOR\$WRITE_SL (unit.rl.v,
0000 140 [, err_adr.j.r [, end_adr.j.r]])
0000 141
0000 142 : INPUT PARAMETERS:
0000 143
0000 144 unit.rl.v logical unit number
0000 145 [,err_adr.j.r] optional ERR= address
0000 146 [,end_adr.j.r] optional END= address
0000 147
0000 148 : IMPLICIT INPUTS:
0000 149
0000 150 NONE except those used by FOR\$IO_BEG.
0000 151
0000 152 : OUTPUT PARAMETERS:
0000 153
0000 154 NONE
0000 155
0000 156 : IMPLICIT OUTPUTS:
0000 157
0000 158 NONE except those left by FOR\$IO_BEG.
0000 159
0000 160 : COMPLETION CODES:
0000 161
0000 162 NONE
0000 163
0000 164 : SIDE EFFECTS:
0000 165
0000 166 NONE except those of FOR\$IO_BEG.
0000 167
0000 168 :--
0000 169
0000 170 FOR\$WRITE_SL:: .MASK FOR\$IO_BEG
0000 171 MOVZBL #ISBK ST_TY_WSC, R0 : Statement type
0000 172 JMP G^FOR\$IO_BEG+2 : branch past call mask
000B 173
000B 174
000B 175 .END

50 09 0000' 0000
00000002'GF 17 9A 0002
0005

FOR\$WRITE_SL
Symbol table

F 10
- entry point for FORTRAN WRITE SEQUENTI 16-SEP-1984 00:06:17 VAX/VMS Macro V04-00
6-SEP-1984 11:02:09 [FORRTL.SRC]FORWRITSL.MAR;1 Page 5 (4)

FOR\$10_BEG
FOR\$REC_WSL0
FOR\$REC_WSL1
FOR\$REC_WSL9
FOR\$UDF_WL0
FOR\$UDF_WL1
FOR\$UDF_WL9
FOR\$WRITE_SL
ISBSK_ST_TY_WSL

***** X 00
00000000 RG 01
= 00000009

+-----+
! Psect synopsis !
+-----+

PSECT name

PSECT name	Allocation	PSECT No.	Attributes
ABS	00000000	(0.) 00	(0.) NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
FOR\$CODE	00000008	(11.) 01	(1.) PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

+-----+
! Performance indicators !
+-----+

Phase

Phase	Page faults	CPU Time	Elapsed Time
Initialization	32	00:00:00.09	00:00:00.89
Command processing	126	00:00:00.66	00:00:06.67
Pass 1	124	00:00:01.27	00:00:04.75
Symbol table sort	0	00:00:00.20	00:00:00.50
Pass 2	46	00:00:00.46	00:00:01.68
Symbol table output	2	00:00:00.02	00:00:00.02
Psect synopsis output	3	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	335	00:00:02.72	00:00:14.65

The working set limit was 1050 pages.

6663 bytes (14 pages) of virtual memory were used to buffer the intermediate code.

There were 20 pages of symbol table space allocated to hold 187 non-local and 0 local symbols.

175 source lines were read in Pass 1, producing 8 object records in Pass 2.

9 pages of virtual memory were used to define 2 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name

\$255\$DUA28:[FORRTL.OBJ]FORRTL.MLB:1
\$255\$DUA28:[SYSLIB]STARLET.MLB:2
TOTALS (all libraries)

Macros defined

2
0
2

183 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:FORWRITSL/OBJ=OBJ\$:FORWRITSL MSRC\$:\$FORWRITSL/UPDATE=(ENHS:\$FORWRITSL)+LI

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